

IN THE CLAIMS

Following are the claims as amended herein and as are currently pending for consideration:

1-3. (Canceled)

4. (Presently Amended) The computer software product recited in Claim 1 A computer software product including one or more recordable media having executable instructions stored thereon which, when executed by a processing device, causes the processing device to:

initialize a symbolic simulation relation for an assertion graph on a first symbolic lattice domain, wherein the assertion graph on the first symbolic lattice domain is configurable to express a justification property to verify by computing the symbolic simulation relation.

5. (Original) The computer software product recited in Claim 4 which, when executed by a processing device, further causes the processing device to:

compute the symbolic simulation relation for the assertion graph on the first symbolic lattice domain; and

check the symbolic simulation relation to verify a plurality of properties expressed by a plurality of assertion graph instances, having at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.

6-7. (Canceled)

8. (Presently Amended) ~~The computer software product recited in Claim 1~~ A computer software product including one or more recordable media having executable instructions stored thereon which, when executed by a processing device, ~~further~~ causes the processing device to:

initialize a symbolic simulation relation for an assertion graph on a first symbolic lattice domain; and

compute the symbolic simulation relation for the assertion graph on the first symbolic lattice domain to verify the assertion graph according to a normal satisfiability criteria.

9-13. (Canceled)

14. (Presently Amended) ~~The method recited in Claim 9~~ A method comprising:

initializing a symbolic simulation relation for an assertion graph on a first symbolic lattice domain, wherein the assertion graph on the first symbolic lattice domain is configurable to express a justification property to verify through computing the symbolic simulation relation.

15. (Original) The method recited in Claim 14 further comprising:

computing the symbolic simulation relation for the assertion graph on the first symbolic lattice domain; and  
checking the symbolic simulation relation to verify a plurality of properties

expressed by a plurality of corresponding assertion graph instances, having at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.

16. (Original) A method comprising:

specifying a justification property with an assertion graph.

17. (Original) The method recited in Claim 16 wherein the assertion graph is on a first symbolic lattice domain; and the justification property is expressed by one of a plurality of instances of the assertion graph, at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.

18. (Original) The method recited in Claim 17 further comprising:

computing a symbolic simulation relation for the assertion graph on the first symbolic lattice domain; and

checking the symbolic simulation relation with a symbolic consequence labeling for the assertion graph on the first symbolic lattice domain according to a normal satisfiability criteria.

19. (Original) A method comprising:

merging a plurality of properties in an assertion graph on a first symbolic lattice domain by using a symbolic labeling.

20. (Original) The method recited in Claim 19 wherein the symbolic labeling comprises a symbolic indexing function to encode a plurality of labels for a plurality of assertion graph instances, having at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.

21-26. (Canceled)

27. (Presently Amended) ~~The verification system of Claim 9~~ A verification system comprising:

means for initializing a symbolic simulation relation for an assertion graph on a first symbolic lattice domain, wherein the assertion graph on the first symbolic lattice domain is configurable to express a justification property to verify through computing the symbolic simulation relation.

28. (Original) The verification system of Claim 27 further comprising:

means for computing the symbolic simulation relation for the assertion graph on the first symbolic lattice domain; and

means for checking the symbolic simulation relation to verify a plurality of properties expressed by a plurality of corresponding assertion graph instances, having at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.

29. (Original) A verification system comprising:

means for specifying a justification property with an assertion graph.

30. (Original) The verification system of Claim 29 wherein the assertion graph is on a first symbolic lattice domain; and the justification property is expressed by one of a plurality of instances of the assertion graph, at least one assertion graph instance on a second lattice domain different from the first symbolic lattice domain.